Proof of Concept for a Nationwide Highway Mass Casualty Readiness Measurement Project:

Model Inventory of Emergency Care Elements "MIECE"

A proposed method to quantify EMS and emergency care resources expected to be available in the event of a highway mass casualty incident and classify segments of highways based on the results.

National Association of State EMS Officials (NASEMSO)
March 2011

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Background

Buses are usually a very safe way to travel in America. Professional drivers conduct their passengers along well established routes, logging millions of miles with little trouble. Nonetheless, bus crashes do happen every year in America, and the large numbers of passengers in these high capacity vehicles can result in many serious injuries simultaneously among multiple victims. If a crash occurs near a large city with ample emergency response personnel, emergency vehicles and equipment, and rapid transportation to specialized trauma centers, it is a challenging but relatively manageable issue to quickly care for the injured.

What about the rural areas that comprise most of the nation?

While only 23 percent of the U.S. population lived in rural areas in 2008, rural fatalities accounted for 56 percent of all traffic fatalities that year (NHTSA, 2010). Also in 2008, the fatality rate per 100 million vehicle miles traveled was 2.6 times higher in rural areas than in urban areas (2.11 and 0.81, respectively) (NHTSA, 2010). The frequency of fatal crashes involving large buses, often referred to as motorcoaches, was documented through the NHTSA Fatal Accident Reporting System (FARS) as occurring an average of 137 times a year during the period from 2000 to 2007, with less than 25 percent of these occurring in rural areas. Despite comprising less than a quarter of those fatal crashes, the rural incidents accounted for 56 percent of the fatalities and 72 percent of the non-fatally injured victims. According to FARS data, over 220 Mass Casualty Incidents (MCIs) involving fatalities occurred in 2009. Over 2000 people were involved, injured or killed in these crashes.

People who are seriously injured in rural crashes can wait for hours to reach definitive care at an appropriate trauma center. The Institute of Medicine published *Emergency Medical Services: At the Crossroads,* in which it supports regionalized systems of trauma care, where death rates among severely injured patients are significantly lower when they receive care at a trauma center (IOM, 2006). The Centers for Disease Control and Prevention emphasizes findings from recent research indicating that seriously injured trauma victims are 25% less likely to die if they are treated at a trauma center (CDC, 2009; MacKenzie, Rivara, Jurkovich, Nathens et al, 2006). EMS providers are trained using the concept of the “golden hour” after a crash, to reinforce the central truth of evidence-based trauma care: the sooner a critically injured victim gets to a trauma center, the better the outcomes tend to be.

Mexican Hat Bus Crash

In 2008 a charter bus with 52 passengers was being driven on a rural highway near Mexican Hat, Utah. It departed the road and rolled completely over; 50 passengers were ejected when the roof was ripped away. Seven passengers died at the scene; two more died within hours, and 43 were injured, many seriously, as was the driver (NTSB, 2009).

Significant delays occurred before the crash was even reported to the 9-1-1 center and area EMS providers. Helicopters were grounded due to inclement weather, and some of the responding ambulances had to drive hours to the scene. In this remote part of the state, the closest hospital was 75 miles away. It was more than four hours before the last patients were finally on their way to area hospitals. The number of patients overwhelmed local medical facilities, and some patients were transferred twice before they reached a hospital that could give them appropriate care (NTSB, 2009).

There are many key elements that improve the speed and effectiveness of the response, including prompt activation of the EMS system, effective coordination of the responders, rapid response by appropriately trained caregivers, sufficient transportation resources and active tracking of the capacity of nearby hospitals. All the elements should work in seamless coordination to save the greatest number of patients.

The unfortunate reality of rural America's emergency care system, however, is that the critical elements to assure optimal patient outcome are rarely all available in a given area. The "paramedic paradox" is a term coined by former Maine EMS Director Kevin McGinnis. It holds that the rural communities that would benefit from highly trained paramedics during long transports don't have them, while larger urban communities with short transport times – and larger budgets – enjoy a relative abundance of EMS talent. The need/supply paradox extends throughout the system: rural communities tend to be smaller, with fewer hospitals, doctors and nurses - exactly the reverse of urban settings. Surgical interventions, a level of care often critically needed by trauma patients, may not be an immediate option in rural hospitals.

The risk is not limited to buses. Rural resources may be overwhelmed by relatively few patients, compared to urban areas. Twelve parishioners in an overturned church bus or even seven family members in a crushed minivan may present local providers with more patients than they can effectively manage and timely transport to an appropriate destination. The Institute of Medicine's *Emergency Medical Services: At the Crossroads* describes the national EMS system as "a fragmented and sometimes balkanized network of underfunded EMS systems" (p. 18).

After the Mexican Hat crash, the National Transportation Safety Board (NTSB) conducted an investigation and published a report that included several recommendations concerning motorcoach and roadway safety. The NTSB (2009) asked the National Association of State EMS Officials (NASEMSO) and the American Association of State Highway and Transportation Officials (AASHTO) to work with the Federal Highway Administration (FHWA) "to develop and implement criteria…that can be used to assess the risks of rural travel by large buses" (p. 56).

Another NTSB (2009) recommendation was for the Federal Interagency Committee on EMS (FICEMS) to "Evaluate the system of emergency care response to large-scale transportation-related rural accidents… " (p. 55). It was primarily as a result of the NTSB directives that the National Highway Traffic Safety Administration, Office of EMS (NHTSA/OEMS) made project funding available to develop a method to assess risk by evaluating emergency resource availability and readiness, and to present that risk in a clear and easily understood way.

This document presents one of the concepts that emerged from the National Association of State EMS Officials (NASEMSO) in the wake of the NTSB recommendations: the **Model Inventory of Emergency Care Elements (MIECE)**.

What is MIECE?

The **Model Inventory of Emergency Care Elements (MIECE,** pronounced "mice") is a tool to measure the emergency medical services (EMS) system's capability to respond to mass casualty incidents within a given geographic area. This model inventory includes measurable characteristics of the emergency care system, such as ground EMS agencies, rescue services that provide vehicle extrication, helicopter emergency medical services, hospitals and designated trauma centers, to name just a few. MIECE's matrix of data elements is modeled after the US Department of Transportation's Model Inventory of Roadway Elements (MIRE), which is also a geographically organized resource inventory using defined characteristics intended to contribute to risk assessment, system improvement, and retrospective analysis. By measuring and scoring these EMS characteristics along segments of our nation's roadways, a visual representation of the EMS system's capabilities could be displayed.

The concept includes a scorecard-like assessment of local emergency care resources which could ultimately be used to create a snapshot in time or dynamic real-time "dashboard" where highway officials, EMS officials, motor coach route planners, and even the public could look at a regularly updated highway map and see the capability of the emergency medical and hospital care system in the area. The working principle is that this is a measure of risk, i.e., medical response in the post crash phase. Conceivably, this kind of information may factor into trip planning and re-routing decisions just as conditions such as weather changes, road closures, and others are considered. MIECE would enable a visual representation of areas of higher and lower relative risk, based on the resources available in a given region.

Personnel in every state EMS office can generally describe where they would least like to have a highway crash. This tool would bring that same situational awareness to travelers, enabling them to adjust their plans accordingly. It would also provide critical information to state and local officials, highway safety administrators, and planners by targeting where emergency care system improvements are most needed. The resulting increase in system capability could ultimately save lives and reduce injuries by enhancing access to emergency care.

At this stage of the project, MIECE is limited to a "proof a concept" to determine if the model inventory is feasible and worth further development. Future projects may explore how this tool

could be used for highway safety improvement opportunities through EMS system capability changes with the ultimate goal of reducing the deaths and permanent disabilities caused by rural highway crashes. Other exploration that may occur in the future would include how it could show the resources along a given highway segment using a data format compatible with many computer aided design and dynamic display systems. This would include technical configuration determinations to make the data compatible for display through on-line dashboards already in use in many states to track real-time resource availability and a visual representation of areas of relative risk.

This project is intended to illustrate the feasibility and utility of *an emergency care inventory that displays resources and capacity by segment of interstate highway*. It does not entail the complete development of all elements and underlying collection mechanisms in an emergency care inventory; rather, it represents a proof of concept for what could emerge as a full scale project in the future.

Where is MIECE to be used?

MIECE is designed to be used in rural areas where EMS resources are much more limited than in the urban settings. The presumption is that the anticipated resources expected to be available to respond to a highway in a rural county can be measured, translated into color coding, and mapped on a statewide or nationwide basis. Because the score or numerical value of many inventory components is determined by an elapsed time to respond factor, a consistent point of measurement is necessary for this exercise. The geographical center point of an interstate in a county serves as the point for which the response time is measured.

How is MIECE to be used?

The goal of MIECE is to quantify EMS, hospital, and patient transportation resources available by segments of highway. Once the resources are determined for a geographical area, numerical values for each category of resource and corresponding color codes can be assigned. In the end, a road map would depict the risk level (regarding EMS, hospital, and patient transportation resources) by highway segment using color coding. With such a map, drivers (particularly those carrying multiple passengers) could use the map as one basis for choosing safe travel routes. In addition to EMS leadership, others can use the inventory results to identify needs and system improvement, such as state and local transportation officials, emergency managers, and health preparedness personnel.

To build an inventory of EMS resources, the focus must be on measureable characteristics of an emergency care system which may be factors in patient outcome. Because this project is limited to a “proof of concept” to determine if the concept is feasible, it begins with high level resources. The project work group identified the following resources to demonstrate how such a model could be constructed:

1. Personnel
2. Transportation

3. Communications
4. Equipment/Inventory
5. Medical Facilities
6. Other

These resources or **inventory categories** include **data elements,** each of which is measured or estimated and entered by the individual responsible for completing the inventory for that geographical area. For instance, the transportation category includes four data elements: ground ambulance, air ambulance, multiple patient transport vehicle and mass casualty support vehicle. The **value** or **score** for each data element is determined by the number of such units expected to respond within specified time intervals. A low value is color coded red, a mid-range value is yellow and a high value is green.

Future work on this project would include subject matter expert development of an index and setting what range of values would be considered low, medium or high (or poor, better, best) that would lead to the assignment of a color of red, yellow or green to the number entered for that data element. For example, the person completing the inventory is asked to estimate the number of ambulances that would respond to the specified location within 30 minutes of dispatch. The subject matter expert panel will have set a range of responses, e.g., zero to 3 as "low" or "poor", so a response of 2 would be coded red. The range set for "medium" or "better" might be 4 through 9, and "high" or best might be 10 or more. The ranges of values will be set in advance and then validated after the first use of the inventory on a statewide or nationwide basis. Next generation project work would also include the development of how all scores are weighted and calculated together to arrive at color code for the entire segment.

For illustration purposes, a completed matrix and several examples of color-coded road maps are shown on pages 6 through 8. These illustrations are hypothetical and meant to show possible outcomes if the MIECE Proof of Concept were further developed. Pages 9 through 15 depict the model inventory for the six high level resources named above.

EXAMPLE

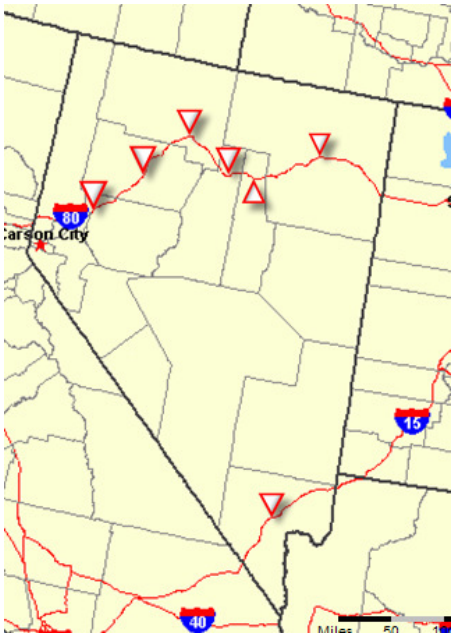
This fictitious example has been scored and color coded for a single rural county. The last column on the far right is used for scoring.

State: *NI* County: *Colder*
Interstate: *I-30* Mile marker: *88*

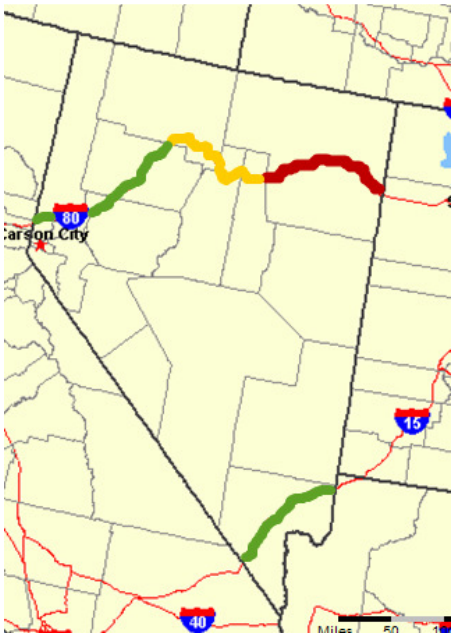
Inventory Category 2 – Transportation

Data Element	Definition	Metric	Source	Value/No.
2 (a) Ambulance (Ground)	Provides out-of-hospital emergency medical care, evacuation and ground transportation services via licensed EMS service. Minimum requirements: capable of transporting one or more litter patients; staffed by one or more EMTs.	Number expected to arrive within 30, 60, and 90 minutes after notification	State EMS Licensing Data	30 min **1 amb** 60 min **4 amb** 90 min **10 amb**
2 (b) Ambulance (Air)	Provides emergency medical care, evacuation and transportation services via aircraft. May also be utilized to import personnel and/or equipment/supplies into the area of need. Minimum requirements: Staffed by one paramedic and a pilot; capable of carrying one or more litter patients; day or night operations using VFR (visual flight rules).	Number expected to arrive within 60, 120 and 180 minutes after notification	State EMS Licensing Data	60 min **0 air amb** 120 min **4 air amb** 180 min **4 air amb**
2 (c) Multi-Patient Medical Transport Vehicle	Provides basic medical support, transportation and evacuation services via multi–passenger vehicle; capable of transporting several seated (ambulatory) patients, staffed by a minimum of one EMT and a licensed driver.	Number expected to arrive within 60 minutes of notification	MCI / Disaster Plan	**0 multi patient vehicles**
2 (d) Mass Casualty Support Vehicle	Vehicle available to move medical support resources (people and supplies) to and from the scene	Number expected to arrive within 60 minutes of notification	MCI / Disaster Plan	**1 support vehicle**

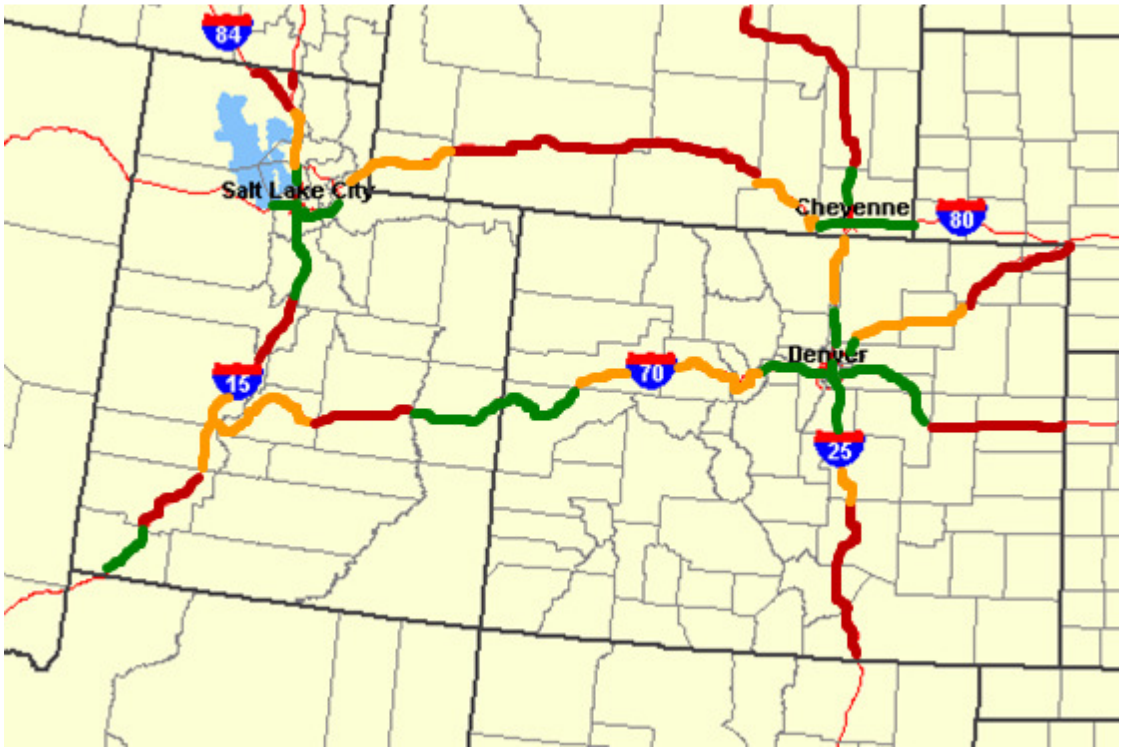
The following illustrations depict how segments of interstate highways (and eventually any segment of rural highways) could be “mapped” to illustrate expected EMS system capability based on inventory results. Given a selected state with county boundaries displayed and an overlay of the interstate system, the midpoint of the interstate in each rural county is determined as the incident location for measurement purposes:



After completion of the inventory, scores compared to pre-established indices result in color coding based on index ranges and overall results. Each segment’s risk is displayed as red, yellow or green:



Regional views provide for visual comparison along the same route across multiple states:



Assumptions

Most, but not all, elements will have an elapsed time or distance **METRIC** component. Other elements will have a metric component that measures whether a certain capability or resource is in place and may be a simple yes/no (such as whether the area PSAP provides emergency medical dispatch). When scoring, a few assumptions must be made in order to ensure some uniformity and consistency. The following assumptions are made for purposes of this exercise.

- *The area is experiencing ideal weather.*
- *All responses, operations and patient transports are occurring under daylight conditions.*
- *The incident is on or adjacent to a roadway.*
- *No conditions exist (maintenance problems, staff out sick, etc.) which compromise agency capabilities.*
- *All response time measurements start with 1st notification to the resource being measured.*
- *Focus is geographic in nature, rather than what one agency has (MIECE is capturing what resources can get to the scene and how fast, not which agency is providing it).*

DRAFT INVENTORY – PROOF OF CONCEPT

State: County:

Interstate #: Mile marker:

Inventory Category 1 – Personnel

Data Element	Definition	Metric	Source	Value/No.
1 (a) Licensed EMS Personnel (BLS)	EMS personnel able to provide basic life support care (first/emergency responders and emergency medical technicians)	Number expected to arrive within 30, 60, and 90 minutes of notification	State EMS Licensing Data	30 min 60 min 90 min
1 (b) Licensed EMS Personnel (ALS)	EMS personnel able to provide advanced life support care (intermediate /advanced EMTs and paramedics)	Number expected to arrive within 30, 60 and 90 minutes of notification	State EMS Licensing Data	30 min 60 min 90 min
1 (c) Other Public Safety Personnel	Other public safety personnel not licensed as EMS providers (fire fighters, law enforcement officers) who have skills needed at the scene of vehicle crash (extrication, traffic incident management, etc).	Number expected to arrive within 30, 60 and 90 minutes of notification	State Law Enforcement Officer and Fire fighter Licensing Data	30 min 60 min 90 min
1 (d) EMS Medical Directors	Licensed physicians with experience in and responsibility for providing on scene medical direction to ambulance crews	Number expected to arrive within 30, 60, 90 minutes of notification	State EMS Licensing Data	30 min 60 min 90 min

Inventory Category 2 – Transportation

Data Element	Definition	Metric	Source	Value/No.
2 (a) Ambulance (Ground)	Provides out-of-hospital emergency medical care, evacuation and ground transportation services via licensed EMS service. Minimum requirements: capable of transporting one or more litter patients; staffed by one or more EMTs.	Number expected to arrive within 30, 60, and 90 minutes after notification	State EMS Licensing Data	30 min 60 min 90 min
2 (b) Ambulance (Air)	Provides emergency medical care, evacuation and transportation services via aircraft. May also be utilized to import personnel and/or equipment/supplies into the area of need. Minimum requirements: Staffed by one paramedic and a pilot; capable of carrying one or more litter patients; day or night operations using VFR (visual flight rules).	Number expected to arrive within 60, 120 and 180 minutes after notification	State EMS Licensing Data	60 min 120 min 180 min
2 (c) Multi-Patient Medical Transport Vehicle	Provides basic medical support, transportation and evacuation services via multi–passenger vehicle; capable of transporting several seated (ambulatory) patients, staffed by a minimum of one EMT and a licensed driver.	Number expected to arrive within 60 minutes of notification	MCI / Disaster Plan	
2 (d) Mass Casualty Support Vehicle	Vehicle available to move medical support resources (people and supplies) to and from the scene	Number expected to arrive within 60 minutes of notification	MCI / Disaster Plan	

Inventory Category 3 – Equipment

Data Element	Definition	Metric	Source	Value/No.
3 (a) Patient Care Equipment Caches	Caches of additional equipment used for treating patients in large scale events (personal protective products, bandaging and splinting supplies, backboards, etc., which may include pediatric equipment)	Number of caches expected to arrive within 30, 60, and 90 minutes of notification	MCI / Disaster Plan	30 min 60 min 90 min
3 (b) Other Equipment & Supply Caches	Caches of equipment and supplies, other than patient care equip/supplies, needed in large scale events (fuel, blankets, flashlights, batteries, generators, etc.)	Number of caches expected to arrive within 30, 60 and 90 minutes of notification	MCI / Disaster Plan	30 min 60 min 90 min
3 (c) Rescue/Vehicle Extrication Equipment--Basic	Tools and equipment for extricating passengers entrapped in vehicles	Number expected to arrive within 30, 60 and 90 minutes of notification	MCI / Disaster Plan	30 min 60 min 90 min
3 (d) Rescue/Vehicle Extrication Equipment- - Specialized	Specialized equipment for difficult extrications of passengers entrapped in vehicles	Number expected to arrive within 30, 60 and 90 minutes of notification	MCI / Disaster Plan	30 min 60 min 90 min
3 (e) Lighting	Portable lighting equipment for illuminating scene during night time operations	Number expected to arrive within 30, 60 and 90 minutes of notification	MCI / Disaster Plan	30 min 60 min 90 min

Inventory Category 4 – Public Safety Answering Points (PSAPs) and Communication

Data Element	Definition	Metric	Source	Value/No.
4(a) Basic 911	Service that routes 911 calls to PSAP	100% of the area has 911 coverage.	State 911 Agency	Yes/No
4 (b) Enhanced 911	PSAP is able to determine caller location when caller is using landline telephone.	100% of the area has Enhanced 911 coverage.	State 911 Agency or PSAP	Yes/No
4 (c) E 911 Phase I Compliance	PSAP has call back number of a wireless caller and can identify cell tower from which call originated.	Area PSAP is Phase 1 compliant.	State 911 Agency or local PSAP	Yes/No
4 (d) E 911 Phase II Compliance	Phase II includes Phase I features plus ability to identify location of wireless caller within 125 meters 67% of time and selective routing based on the coordinates.	Area PSAP is Phase II compliant.	State 911 Agency or local PSAP	Yes/No
4(e) Emergency Medical Dispatch (EMD)	Triage of incoming calls to PSAP (or EMS dispatch center) to determine level of response and providing pre-arrival instructions to caller	Area PSAP (or EMS dispatch center) uses EMD	State 911 Agency or local PSAP	Yes/No
4 (f) Two-way Radio Coverage	The ability to communicate by two-way radio on the primary frequencies assigned to public safety/EMS in the area	Percent of EMS /public safety agencies which can communicate on the primary frequencies	State Radio Communications Office	
4(g) Interoperability	Ability of two-way radio users to communicate with each other	Technology in place to support radio interoperability among EMS / public agencies	SAFECOM Interoperability Continuum	
4(h) Hospital to Scene Communications	Ability of responders at the scene to communicate directly with hospital personnel	Percent of area hospitals able to speak with EMS at the scene	Disaster/MCI Plan	
4(i) Hospital Broadband Access	Ability of hospitals to receive medical data/images via broadband	Percent of area hospitals with broadband access	Hospital Association	
4(j) Plain English vs. 10 Codes	Radio users speak in everyday English rather than using radio “10 codes.”	Percent who speak in everyday English	State Radio Commun. Office	

Inventory Category 5 – Medical Facilities

Data Element	Definition	Metric	Source	Value/No.
5 (a) Trauma Center, Level I or II	Inpatient acute care medical facility designated by the State or verified by the American College of Surgeons, Committee on Trauma (ACS-COT), as providing the level of care to patients with traumatic injuries meeting the ACS-COT defined characteristics of a level I or II trauma center. [1]	Number of facilities within 30, 60, 90 minutes	Hospital Association or Trauma System Data	30 min 60 min 90 min
5 (b) Trauma Center, Level III	Inpatient acute care medical facility designated by the State or verified by the American College of Surgeons, Committee on Trauma (ACS-COT), as providing the level of care to patients with traumatic injuries meeting the ACS-COT defined characteristics of a level III trauma center. [1]	Number of facilities within 30, 60, 90 minutes	Hospital Association or Trauma System Data	30 min 60 min 90 min
5 (c) Trauma Center, Level IV or V	Inpatient acute care medical facility designated by the State as providing the level of care to patients with traumatic injuries meeting the state-defined characteristics of a level IV or V trauma center. [2]	Number of facilities within 30, 60, 90 minutes	Hospital Association or Trauma System Data	30 min 60 min 90 min
5 (d) Other Specialty Resource Hospital (other than Trauma)	Inpatient acute care medical facility licensed by the State and deemed by a nationally recognized healthcare organization as providing specialty care of a medical condition or population (burn center, stroke center, STEMI center, pediatric hospital, etc.)[3]	Number of facilities within 30, 60, 90 minutes	Hospital Association or State Hospital Licensing Data	30 min 60 min 90 min

[1] Many states designate trauma centers using recognized variations to the ACS-COT criteria for specific trauma center capabilities at each level.
[2] While Level IV and V trauma centers are not verified by ACS-COT, many states designate these lower levels of trauma centers so that all hospitals are categorized and participate in a statewide trauma system.
[3] Hospitals are to be counted only once regardless of how many categories apply.

5 (e) Community Hospital	Inpatient medical facility licensed by the State, other than Critical Access Hospitals or those verified or designated as a specialty hospital (by a state or nationally recognized healthcare specialty organization)	Number of facilities within 30, 60, 90 minutes	Hospital Association or State Hospital Licensing Data	30 min 60 min 90 min
5 (f) Critical Access Hospital	Smaller inpatient acute care medical facility (fewer than 25 inpatient beds) located in a rural area and designated by CMS (Centers for Medicare/Medicaid Services) as a Critical Access Hospital. *(Many Critical Access Hospitals may also be level IV or V state-verified trauma centers. For purposes of MIECE, list these hospitals as trauma centers and not as CAHs.)*	Number of facilities within 30, 60, 90 minutes	Hospital Association or State Hospital Licensing Data	30 min 60 min 90 min
5 (g) Free-Standing Emergency Department	Outpatient medical facility not physically attached to a hospital, which provides emergency medical services 24 hours a day	Number of facilities within 30, 60, 90 minutes	State Health Facility Licensing Data	30 min 60 min 90 min
5 (h) Outpatient Clinic	Medical facility staffed by one or more licensed physicians, nurse practitioners, or physician assistants, which provides non-emergency services on an outpatient basis only	Number of facilities within 30, 60, 90 minutes	State Health Facility Licensing Data	30 min 60 min 90 min

Inventory Category 6 – Other

Data Element	Definition	Metric	Source	Value/No.
6 (a) Incident/Unified Command System (ICS)	System used for the command, control and coordination of an emergency response. ICS is meant to promote coordination among responders from various entities who do not normally work together.	Percent of EMS/public safety personnel trained in Incident Command System (ICS)	MCI/Disaster Plan or State Emergency Management Agency	
6 (b) Incident/Unified Command System (ICS) – Hospital	Systematic process used for the command, control and coordination of an emergency response.	Percent of area hospitals that conduct ICS training for hospital staff	MCI/Disaster Plan or State Hospital Association	
6 (c) Traffic Incident Management System	Process for coordinating responders and others at the scene of a traffic incident in order to ensure safety of responders and the public.	Percent of EMS/public safety personnel trained in TIM system	State EMS Office	
6 (d) Patient Tracking	System for tracking each patient from the initial contact at the scene to the final destination	Percent of area EMS agencies with patient tracking system	MCI/Disaster Plan or Local EMS Agencies	
6 (e) Hospital Bed Status Monitoring System	Computerized system that tracks available beds in hospitals in real time and makes information available to dispatch/EMS is in place	Hospital bed status monitoring system is in place for the area.	MCI/Disaster Plan or State Health Dept.	Yes / No
6(f) Triage System	System used by EMS at the scene of a multiple casualty incident to determine prioritization of patient care	Percent of responders using the same triage system	MCI/Disaster Plan	
6 (g) Full Scale Exercises	Practicing the response to a mock disaster where all levels of participating organizations are involved	Number of full scale exercises held within last 3 years	State Emergency Management Agency	
6 (h) Designated Landing Zones	Pre-determined areas for safe landing by air ambulances either adjacent to scene or en route to hospital	Number of designated landing zones/rendezvous points	MCI/Disaster Plan or State EMS Office	

Acknowledgements

Developed by a multi-disciplinary team led by the **National Association of State Emergency Medical Services Officials (NASEMSO),** MIECE is a special focus of the NASEMSO HITS (Highway Incident and Transportation Systems) Committee, chaired by Dia Gainor. The project was funded by NASEMSO through a cooperative agreement from the **National Highway Transportation Safety Administration (NHTSA), Office of Emergency Medical Services**.

Further information about the Highway Mass Casualty Project is available on the NASEMSO website at http://www.nasemsd.org/Projects/HITS/index.asp or from NASEMSO Program Advisor Mary Hedges at hedges@nasemso.org.

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The Work Group wishes to acknowledge the support and guidance from the following members of the NHTSA Office of EMS in completing this project:

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Laurie Flaherty

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